UNESCO SOURCES

N° 55 : FEBRUARY 1994

ATTENTION: TOURISTS AT LARGE!

IN A VERY NARROW FOCUS

Donald Abbott
St. John's
Newfoundland (Canada)

Your generally constructive analyses (in SOURCES No. 51) underwent a reversal in the assessment of the MAB Programme as you review development in a very narrow focus, if not indeed rewrite history of 25 years ago.

The article concentrates on the contemporary perspective that, back then, the environment was beyond our comprehension and that the world's resources were viewed as inexhaustible.

Yet, such aspects like basic amenities, conservation, human rights, as well as social justice remain part of how we judge, then as now, our progress towards a more just world. Culture, education and science - the work of UNESCO, help us improve our perspective to realize a better life. It is not that former perspectives are wrong, necessarily. We hopefully build on the past for a better tomorrow.

On a related point, you suggest that MAB get off its laurels. A name change - something simple maybe, like the *"Biosphere"* programme, may initiate action there and reflect a more accurate contemporary reality that would be inclusive of women, who are increasingly at the forefront of the environmental debate.

Our report on the circumstances surrounding the birth of the Man and the Biosphere Programme (MAB), was in no way a condemnation of the scientific work undertaken 25 years ago. The author of the article simply states that the ideas looked upon as well-founded at the time, starting with the conviction that human domination of nature knew no limits, were currently being put in question. There is nothing wrong with this, since we are now aware, once and for all, that scientific theories considered valid today may well be refuted tomorrow. The mass of our knowledge also expands through the continuous demonstration of the errors it contains.

As for re-baptizing the MAB Programme by removing the reference to "Man" thus making it inclusive of women, why not? However, since the acronyme is by now so established, it has been suggested that retaining the «M» with a new meaning like "Managing" (in the sense of "rational management of the biosphere" might be even better. - ED.

ONE WITH THE OTHER

Georges Vincent
Retired Teacher
Mons (Belgium)

The remarkable dossier devoted to education in SOURCES No. 53, leads me to a rather paradoxical reflection: 15 pages on the difficulties of education, as against a half page on *"green"* tourism.

At first glance, the immense problem of schooling appears...immensely more important than the preservation of nature against abusive tourism. Theoretically, however, with an all out effort - unfortunately, not very likely - the problem of education could be resolved, illiteracy completely eradicated, and an intellectual culture spread universally. On the contrary, damage done to nature, whatever its origin, is often irreversible and jeopardizes the future.

Universal education and respect for nature are not antagonistic. On the contrary, one should not go without the other.

As you see in this month's dossier (pp. 6 to 16) we wholeheartedly agree. - ED.

A THOUSAND WORDS

Svend Shneck
Teacher
Göteborg (Sweden)

If a picture can paint a thousand words, as the popular song goes, then SOURCES has done it again. Your choice of cover photo for the December 1993 issue (No. 53) is poignant and portrays succinctly the magazine's theme on education for all in developing countries.

What stands out even at the end of reading your FOCUS pieces is the special attention paid by the teacher to the only girl among the four children in the photo. It's an eloquent message which underlines the renewed commitment of the *"Nine Giants"* meeting in New Delhi to make primary education accessible to all irrespective of age or sex.

ERRATUM

Please note in the article devoted to Fay Chung, Zimbabwean Minister of State at the time (she is now Chief, Education Cluster, UNICEF) in our November 1993 (No. 52) issue, the second sentence, paragraph two, last column should read *"4,500 primary schools"* (not 50,000).

As we mentioned in the article, the progress of school attendance rates in Zimbabwe has in recent years been among Africa's highest. This rate increased from 85% in 1980 to 119% in 1992 at primary level and from 8% to 48% at secondary level over the same period. - ED.

SCIENCE AND SHARING

Schoolchildren everywhere, at some stage or another, have scratched their heads over Rabelais' famous maxim - "knowledge without conscience is but the ruin of the soul" - and have had as much trouble dealing with the subject as their teachers have had in marking their essays on it.

And yet if we look at the progress made in only one field, biogenetics, this maxim becomes more relevant today than ever. On the one hand, biogenetics promises a giant leap forward - not only in the treatment of various illnesses, but in agricultural harvests as well. But on the other hand, it also makes the "programming" of human reproduction a very real possibility, and the slide towards eugenics a terryifying risk - be it via a social movement, or under the direction of totalitarian rule.

This overlap of morality, politics, science and its applications, is one of the themes dealt with in UNESCO's just-released World Science Report. However, the overriding theme could be summed up in the phrase: "science without sharing is a source of inequality".

It comes as no surprise to know that four fifths of the world's research and development activities are carried out by only a handful of industrialized countries; that in an economy dominated by competition, demanding perpetual product renewal, the growth of production and the scientific and technical capacity of a country are closely linked. More unexpected though, is the fact that international aid has mainly helped to maintain the status quo: it has privileged the export of scientific products and techniques from the North to the South rather than first transferring the knowledge necessary to master and renew them locally and thus allowing these countries to become self-sufficient.

Yet science and development go hand in hand, and their impact and durability clearly depend on how well they take root.

René LEFORT

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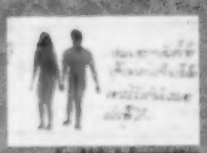

An Aids information campaign in Thailand.

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BOOKS

HYDROLOGY AND WATER MANAGEMENT IN THE HUMID TROPICS: Hydrological research issues and strategies for water management.

Environmental problems in the humid tropical regions are attracting increasing international attention. The distribution of tropical rainfall is highly variable, and in many regions the supply of potable water is inadequate. This book considers all aspects of hydrology in the humid tropics where a significant proportion of developing countries lie. In fact, current estimates suggest that by the year 2000, one-third of world population, over two billion people, will be living there. The first four parts of the book, published under UNESCO's International Hydrological Programme (IHP), cover the physical basis of hydrology in the humid tropics: climatology, meteorology, process hydrology, sedimentation, water quality and freshwater ecology. This is followed by extensive treatment of human and societal issues: land-use changes, water management, and rural and urban water supply.

● ***Hydrology and Water Management in the Humid Tropics:*** Hydrological research issues and strategies for water management, *M. Bonell, M. M. Hufschmidt & J.S. Gladwell, eds. UNESCO/Cambridge University Press 1993, 590 pp.*

FAMILIES: Celebration and hope in a world of change.

Of all our institutions, the family is the one that matters most. It cradles the next generation and is the place where most of us learn, and teach others, how to be human beings. Within the family we may find some of our most positive and satisfying relationships. But it can also deal us devastating blows. The family bears ultimate responsibility for grappling with human problems, yet never before has it faced so many changes. *Families* addresses the issues of changing roles and forms, including its survival in the face of poverty - and AIDS, how it is influenced by equality of the sexes, and how we may create a world where the young and old enjoy a full say in society. (see article pp.18-19)

● ***Families: Celebration and hope in a world of change****, by Jo Boyden, UNESCO/GAIA 1993, 175 pp., illus., 130 FF.*

PERIODICALS

MUSEUM INTERNATIONAL

Fashion and costume museums. With a sketch by Emanuel Ungaro on the cover, this issue (No. 179) explains why "clothes are more than simple protection against the elements." "Preserving Human Packaging," by Elizabeth Ann Coleman of the Museum of Fine Arts in Houston, Texas (U.S.A.), explains why clothes are crucial to an understanding of history and cultures. The magazine also reports on the how and why of a collection in some of the over 100 museums devoted to the

theme. Other articles describe how staff and visitors relate to one another, France's battle against illicit traffic in art, and efforts by the Pushkin Museum in Moscow to gain the help of visitors for the attribution of portraits in its collection.

THE UNESCO COURIER

The World of Words

The February *Courier* focuses on the over 5,000 languages spoken in the world today, and the multitude of ingenious strategies different peoples have devised for communicating across linguistic and cultural boundaries: bi and multilingualism, *lingua francas*, Pidgin, etc. It reports on Nigeria, a nation of 400 languages seeking a common medium of communication, languages facing extinction like those of Siberia's minority peoples, or problems of Chinese immigrants in Australia to overcome cultural differences, as nerve-wracking as learning a new language. An interview with French paleontologist Yves Coppens is also included.

COPYRIGHT BULLETIN

In his article on "Protection of Broadcasting Organizations under the Rome Convention" Werner Rumphorst, Director of Legal Affairs at the European Broadcasting Union (EBU) presents the point of view of broadcast organizations, one of the parties (along with Performers and Producers) protected under the Convention, on its possible revision. This issue also features "A Survey of Taxation of Copyright Royalties in Latin America" by Carmen Gomez de la Torre-Aledo (Peru). News on Conventions includes declarations by the Czech Republic and Slovakia "considering themselves bound" by the treaties to which the Czech and Slovak Federal Republic was a party before its dissolution.

RECORDS

VIET NAM: Tradition of the South

The "entertainment" music on this recording is played in different "modal nuances" to convey various sentiments: joy, serenity, melancholy... Since great importance is attached to improvisation, the musician first plays a few phrases in a free rhythm, and without a pre-established melodic line, in the "mode" of the piece, demonstrating the possibilities of his instrument, his technique, and the originality of his ornamentation. Three instruments are presented here: the *dan tranh*, a zither with 16 steel strings, the *ty bà*, a pear-shaped luth resembling the old Chinese *pipa*, and the *song lang*, a small wooden cylinder, fitted with a "tongue" of horn topped by a small wooden ball with which the musician strikes the cylinder.

● ***Viet Nam: Tradition of the South,*** *Anthology of Traditional Music, UNESCO/Auvidis 1993, Cassette 52 FF, CD 109 FF.*

Publications and periodicals are on sale at the UNESCO Bookshop, or by order from UNESCO Publishing, 7 place de Fontenoy, 75352 Paris 07 SP, and in Member States through national distributors. Catalogue on request.

ARYA: DESIGNER OF SEISMIC PROPORTIONS

For 62 year old Anand Swarup Arya, Professor at the Department of Earthquake Engineering at the University of Roorkee in India, building sturdier homes and schools in the world's earthquake-prone regions means more than a mere application of technology to guard against nature's fury. *"It is"*, he says, *"my life's mission. It gives me spiritual solace."*

Dr. Arya has had a close working relationship with UNESCO for many years, working as a consultant in earthquake regions to help populations better protect themselves. His manual *"Protection of Educational Buildings Against Earthquakes"*, published by UNESCO in 1987, remains a reference work for architects, planners and even the layman, bringing together a wealth of designs and proposals on the protection of educational buildings in earthquake prone zones particularly in Asia and the Pacific.

A HUMAN APPROACH

"My approach is not just professional," he says, *"it is human"*. Moreover, wherever he has taught and trained - Iran, Japan, Nepal, The Philippines, Thailand Yemen,- Dr. Arya has gone out of his way to emphasize the cultural specificity of the region.

Most recently he has been working in the Indian state of Maharashtra where a massive quake killed between nine and 10,000 people last September 30. UNESCO has donated $100,000 to the reconstruction effort.

According to Professor Arya, only 20-25percent of the villages needed to be relocated. Others could be simply reinforced with seismic retrofitting of the buildings.. This means inserting earthquake resistant elements in walls - vertical columns, beams, standardised braces and belting around the house for increased protection Braces can be standardized - all they need is a right- angle corner.

Wooden structures underneath the brick and stone of a house means that the ceiling does not cave in. *"It's these little elements that are needed; and our intervention in fact is very limited and not expensive."*

The earthquake also taught some valuable lessons says Arya. *"Wherever we saw thatched houses, we noticed there were no casualties. In one village we came across a framed house with a slanted wall. Ten people were injured inside but there were no deaths. Then there are the masons houses which have thinner walls than usual. and which suffered only minor damage."*

Prof. Arya believes in the adage that prevention is better than cure. *" The retrofitting in Maharashtra can be done by the local people propvided the procedures and materials are well explained and understood. What's the point of fighting the fire after blaze?"*

Latika PADGAONKAR, New Delhi.

OLIVER STONE: HOPE IS NEVER LOST

The film opens in a small village in central Viet Nam in the early 1950s - a period when human folly unleashed forces that shattered the country's ancient ways of life. The war against French colonialism, then the *"second war of Viet Nam"* created havoc where before, human destinies had unfolded with the tranquility and certitude that comes from unbroken, age-old rhythms.

The heroin of Oliver Stone's latest movie, "Heaven and Earth", is forced to flee this village - her home - after being condemned by both warring parties. She successively fills the roles, in the director's words, of *"spy, peasant, beggar, prostitute and mistress"*, during a voyage that takes her from the countryside to the sleazy zones around military bases - where anything and everything is up for sale - and then to the United States as the wife of an American Sergeant. There, a new chapter begins as she becomes a *"housewife"*, then an *"American"*, and finally a *"successful businesswoman"*.

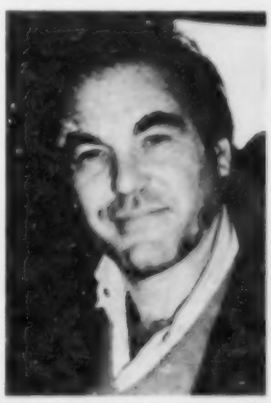
Based on the autobiography of Phung Thi Le Hy, this saga provides the base on which Oliver Stone develops the themes that have become an obsession for him, and which have already marked his previous films: the open wounds caused by the failure of the US intervention not only in Viet Nam but in other third world countries as well, and the realization that such intervention usually caused more harm than good.

"The war completely eradicated the infrastructure of the country, the agricultural structure, and made the people dependent on government. People were put into hamlets and removed from their ancient cemeteries where they worshipped their ancestors, which I found out is a key element of their universe.

When that was taken, as well as their traditional agricultural support system, the people were never able to get it back. That was one of the great underlying tragedies of Viet Nam that I was never aware of as an infantryman."

A NIGHTMARE

The film also pays hommage to women. *"A man would never have been able to adapt or forget those who caused him pain"*. But above all, it reminds us that *"war is a nightmare"* which throws people into extreme situations, *"a lottery where heroism is the result of pure hazard"*.



A denunciation of war, a plea for tolerance, and the affirmation that hope is never lost: UNESCO provided the venue for the French premiere of "Heaven and Earth" at Headquarters of January 17, in the presence of Oliver Stone who has always actively supported the return of the United States to the Organization.

R. L.

● **PRESIDENT OF GEORGIA, Eduard Shevardnadze**, has asked for UNESCO's help in developing his country's sources of renewable energy.
At a meeting with Director General Federico Mayor during his visit to the Organization's Paris Headquarters on January 20, Mr. Shevardnadze also proposed three historic sites in Georgia for inscription on UNESCO's World Heritage List. For his part, Mr. Mayor announced that two technical missions would be sent to the young Republic to see how UNESCO could best respond to the President's requests.
Mr. Shevardnadze was accompanied by his foreign affairs minister and Gosha Chogovadze, who is about to take up his new post as Georgia's Ambassador to France and UNESCO. Georgia became a member of UNESCO in October 1992.

ATTENTION: TOURISTS AT LARGE!

Tourism, one of the world's biggest money-spinners, has provided a real windfall for the planet's nature reserves, including those on UNESCO's World Heritage List (pp. 12-13). However, the prosperity it brings today is matched by the anxiety over what it may bring tomorrow (p. 9). Increasing numbers of tourists require more extensive facilities, turning wilderness areas into veritable industries (p. 11). Despite all precautions, more people on a site inevitably leads to its degradation, whether it be on top of the world (p. 14) or under its oceans (pp. 15-16). And then, the tourist dollar is the least reliable of all, shying instantly away from any sign of instability - as those who manage Africa's natural parks and reserves have learnt from bitter experience (p. 10).

Tourism is a thriving market. The irresistible rise of the tourist industry is one of the most spectacular changes in world trade since the Second World War.

Even as recession leapfrogs from one industrialized country to another, the economic gloom has merely slowed the industry's growth. Between 1985 and 1993 the number of tourist arrivals worldwide swelled from 330 million to more than 500 million. Even before then, in the 1970s and 1980s, the advance was spectacular, easily beating 20 percent in some years. Revenues from international tourism - leaving aside earnings from transport - multiplied eighteen-fold between 1970 and 1993, from US$18 billion to $324 billion. It now accounts for no less than 8.3 percent of total world commerce.

Tourism has taken the number one spot in the world hit parade of trade, ahead of the oil industry. According to the World Travel and Tourism Council (grouping tourism multinationals) this industry employs 183 million people, one worker in ten around the world.

A MARGINAL PHENOMENON

Alan Flook, secretary-general of the International Federation of Travel Agents, which groups 16 tour operator associations in Europe, stresses how the trade has to adapt to *"incredibly varied"* demand. Within this range, what could be described in general terms as eco-tourism *"is still a marginal phenomenon but it is expanding"*. In any case, he says, there is no doubt that tourists have become tired of *"overdeveloped"* destinations like the Balearic Islands and the Costa Brava and are turning away from them in droves.

According to some estimates ecological tourism represents about five percent of the world market. Peter Shackleford, of the World Tourism Organization, says, *"We still have to define what we mean by eco-tourism. But two things are certain: tourists are increasingly aware of the environment, and the trend is towards 'sustainable tourism'"* - a reference to the concept of sustainable development that includes respect for the environment. *"It is a general trend that is taking on the characteristics of a mass movement. We think that in a few years it will be very difficult to sell customers products that do not stand up to environmental quality standards,"* Shackleford notes. A survey of tourists in Nepal showed that 60 percent of them would be willing to pay 5-10 percent more for their trip if they knew the money would be spent on conservation.

The report of the United Nations Environment Programme (UNEP) for 1972-92 sees *"rapid growth"* in demand for eco-tourism: *"More and more people are choosing to spend their holidays in the wilds of nature, which is often made even more attractive by the existence of a specific local culture."* According to different estimates and ways of interpreting the figures, nature-linked tourism could provide the developing countries with an annual goldmine worth billions of dollars. For some countries, such as Kenya, Nepal or Ecuador, it has become a vital source of foreign currency, bringing in far more than earnings than any commodities.

LOCAL INVOLVEMENT

"In Nepal," Bijaya Kattel from the Chit van Royal National Park points out, *"more than half of the foreign tourists come to visit the protected areas"*. Tourist earnings also allow authorities to associate local populations, for whom natural reserves are more often seen as a pantry, with the protection and management of these reserves. The Lake Malawi Park thus employs nearly 200 villagers. At the Kakadu park in the north of Australia, 25 percent of receipts are handed over to the Aborigine community. At the same time such earnings can have other, unwanted, effects, by drawing in more outsiders. At Kakadu, for example, *"the Aborigine community, which was in the majority 20 years ago, has now been outnumbered,"* explains conservationist Peter Willings. In general, population pressure around a natural site can become a danger to the environment, as in the case of Galapagos Islands.

This is the great risk: that tourist pressure will ruin the countryside. As R.W. Butler wrote in the review "Environmental Conservation", *"there is no example of tourist activity that has had no impact on the site."* And as Gaby Fortin, Director of Jasper Park in Canada's Rocky Mountains adds, *"this impact can be very difficult to evaluate."* And to manage.

Even without taking into account adverse effects on biological diversity or social and cultural concerns, from a purely economic point of view, excess impact would devalue the very capital of the tourist industry.

Some experts have even suggested methods of calculating the capital value of nature. The visitor-per-year dollar pulling power of a lion in East Africa comes out at $27,000 for instance, while a herd of elephants attracts $610,000.

So, as Alan Flook underlines, eco-tourism may well be self-defeating. *"If we make a great success of eco-tourism at a splendid site, we imperil the environment that is the basis of that success."* This policy must therefore be handled *"with enormous care, especially at the most fragile sites."*

Like it or not, the natural sites included on UNESCO's World Heritage List are at the centre of these problems and contradictions - because they form the most select club of nature parks, *"the Nobel Prize winners of natural reserves"*, according to Jim Thorsell of the International Union for the Conservation of Nature (IUCN). They include some of the finest scenery in the world and the best-stocked game reserves containing some of the rarest species. They are therefore a rich seam for tourist exploitation. They are all the more attractive because they have, by definition, managed to preserve nature in the raw. So they are at the exact apex of the radical turn that tourism is starting to take.

"Being part of the world heritage has become a selling point," says Professor Trevor Atherton of the Bond University in Queensland, Australia. *"In countries like New Zealand (where more than 30 percent of the land is now listed) or Australia, the promotion of tourism is increasingly based on the prestige of heritage sites."* Kakadu park polled its visitors and found that 80 percent of them knew it was on the World Heritage List. For 40 percent of them that was one, or the sole, reason for their visit. The prestige of the list is so great that it may be time to think about finding a way to claw back a small fraction of this windfall, to enable it to keep up its work of protecting the environment and to help the worst-funded sites in the Third World.

"We have to look after a site bigger than the Grand Canyon in Colorado with an annual budget of $12,000" observes Ibrahima Diop, conservator at the Niokolo Kaba park in Senegal.

"Significant investment will be needed to achieve a better balance between the protection of world heritage sites and their development for the benefit of all, especially the inhabitants of the countries concerned," acknowledges Bernd von Droste, Director of UNESCO's World Heritage Centre. It is however no secret that international organizations like UNESCO have less and less money to spare.

Jim Thorsell, an advocate of *"rigourous management"* in the face of tourist pressure, agrees that *"a way must be found to reinforce the World Heritage Fund."*

Representatives of 10 heritage sites met in Dakar (see SOURCES No. 53) to make a start on exploring these questions. As Col Limpus, Research Director of the Queensland National Parks and Heritage Department commented from Heron Island, *"you can't purely and simply prevent the public having access to these magnificent resources."* But how can an acceptable level of tourism be set? And how can it be enforced? Several participants at the Dakar meeting stressed the importance of "zoning" sites into different areas. Some should be open to the public; others should have restricted access; a third category should be out of bounds. There were more questions asked at this meeting than there were solutions proposed.

The Kakadu representative reported that his park ran training seminars for tour operators, to make them aware of the need to protect the environment and Aboriginal culture. The idea of roundtables between the tourist industry and the national parks was put forward. Moreover, some professional bodies and tourism companies are drawing up codes of conduct. *"For the moment we are not enemies, but we are not far from it,"* exclaimed Gaby Fortin. Conflictual cooperation seemed to sum up the feeling of the meeting, but no clear-cut ways forward emerged. What is certain is that those in charge of natural sites believe it is necessary to have rules, and probably increasingly strict ones. One taboo must be broken, stressed Gaby Fortin: *"National Parks cannot be all things for all people"* Certainly, but how will the choices be made?

Nicolas MICHAUX

THE WORLD HERITAGE LIST

UNESCO's World Heritage List arose from the 1972 World Heritage Convention, affirming the existence of a heritage common to the whole of humanity, which is responsible for its protection and conservation. Today, 95 Member States have 411 sites inscribed on the List, the best known of which are Venice in Italy or Abu Simbel in Egypt. However, it also includes 90 natural sites and 16 so-called "mixed sites", combining an exceptional natural and cultural heritage, such as the Tassili plateau in southern Algeria and its rock paintings.

These natural sites vary considerably, ranging from the Simen Park in Ethiopia, which receives virtually no tourists, to the Great Smoky Mountains Park in the USA which is visited by almost nine million people annually. The biggest natural site on the List is the 35-million-hectare Great Barrier Reef in Australia, while the smallest is the Mai Reserve in the Seychelles which covers just 18 hectares.

Portrait

GUARDIAN OF THE GALAPAGOS

For Craig MacFarland, "at this stage of the game, 'eco-tourism' is still a marketing exercise, there is far more hype than reality."

In fact, in the Galapagos Islands, Craig MacFarland sees quite an opposite trend beginning to emerge. Ecotourism, he believes, is at risk and mass tourism is looming as a real threat.

MacFarland, 50, ecologist and zoologist, is also President of the Charles Darwin Foundation, a research organization set up with UNESCO's support in 1959, to study this unique *"showcase of evolution"* in the eastern Pacific Ocean and advise the Government of Ecuador on how it should be managed and protected. Described by friends as *"culturally sensitive"* and a *"great bridge builder between say local farmers in Mexico and the development bureaucrats of international organizations"*, he is deeply committed to the Galapagos Islands, and not worried about treading on toes to ensure their conservation.

His *"love affair"* with the archipelago began in 1968 when, as a graduate student at the University of Winsconsin (USA) he travelled there by tramp steamer to study the giant tortoises. He has spent a large part of the 25 years since in the Islands, as a field investigator, Director of the Foundation's research station, and from 1985 as its president. In that time he has also seen a lot of changes there.

POPULATION PRESSURE

"The main problem has not been the tourists themselves but the economic boom triggered by their increasing numbers which has in turn set off a population explosion. The annual increase is now 8.5 percent, which means that Islands' population doubles every eight years! This puts a huge pressure on resources."

Many of these immigrants, he says, arrive practically destitute and without any qualifications, thus creating a serious unemployment problem. Then there are the entrepreneurs and tradesmen who set up hotels and restaurants and all the subsidiary industries that these activities lead to, such as fishing. *"Only 20 years ago the islanders lived off a great variety of fish and lobster; today these are difficult to find. Although no conclusive research has been done, experienced divers have told me that there are about two-thirds less sharks in the waters around Galapagos now. And then there is the harvesting of sea-cucumbers, which has not proved sustainable anywhere in the world. What we are seeing is rape and pillage fishing."*

Another worrying problem caused by the increased movement of people has been in the deliberate or accidental introduction of plant and animal species harmful to the Islands' ecosystem. Between the Spanish conquest in the 16th century and the beginning of the 1980s, says MacFarland, some 250 species were introduced. The last 15 years alone have seen the arrival of another 100 - *"most of which are ineradicable"*.

These changes, along with sights such as "protected" sea-lions being slaughtered for shark-bait are starting to rankle tourists. *"Up until now, the visitors who have made the effort to come to the Galapagos have been real 'eco-tourists', seeking a direct contact with nature, space and a little solitude. Often what they are finding these days is a host visitors crowded into one spot."* And tnen there are problems with the general organization. *"Guided tours for boatloads of tourists should promote or even create the operating conditions which respect environmental and security requirements. But in the past eight years there have been at least 15 accidents due to disputes, fire or malicious damage. Passenger processing is not standardized, with so many different procedures that tourists frequently complain.*

"If the bottom falls out of eco-tourism" he adds *"mass tourism will certainly replace it."*

The Foundation's President makes no apology for his grim view of the situation. *"Our job at the Foundation is not to play the nice guy; we study what's happening and present the results to the Government so that it can make the decisions. Our advice doesn't always please... but we must try to avoid what happened in Hawaii, where more than 70 percent of the native fauna and flora has become extinct.*

"The Islands should sell what they have, not create unnecessary super-attractions. Those who are looking for nightlife have their choice of discos in Acapulco, the Caribbean on along the beaches of continental Ecuador. However there are many intermediate individual and corporate financial concerns which have an interest in keeping the system in confusion and disorder. I am not opposed to private enterprise, but it should comply with the standards and requirements of a 'closed system' which respects the environment and governmental rules."

Protecting the archipelago that so inspired Charles Darwin requires some major policy decisions and some *"tough stances"*, argues McFarland. *"It's like 'eco-tourism' and 'sustainable development'"* he says *"we talk a lot about it, but we should be trying to apply it."*

S. W.

THE COST OF THE NEXT VISITOR

Yellowstone National Park is famous for its magnificent forests, geysers, waterfalls and hot springs. Perhaps too famous, says Assistant Superintendent Joseph Alston in this interview with Sources.

At the end of the last century, the first visitors to Yellowstone National Park, found themselves on a wilderness adventure. Today, the park receives three million visitors a year and provides them with a variety of facilities, from restaurants to first aid. The park maintains an extensive system of roads and service stations and offers accommodation, from log cabins to luxury hotels. It employs a staff of 350 which increases to between 700-800 during the summer months. Three thousand individuals work for companies operating concessions. Half a dozen American journalists work full time to keep abreast of developments in the Greater Yellowstone Region and five conservation groups located in the area also keep a close watch on the site.

Already overburdened with the tasks of management, the park authorities have little time left for their primary mission: to understand, monitor and, above all, protect the environment. What is more, demands on the park do not increase at the same rate as the number of visitors, but much more rapidly. In other words, each new visitor is more costly than the one before. When there are several dozen visitors at a particular site, nothing much has to be done. But when hundreds arrive, it is time to think about garbage cans and refreshment stands. And when there are thousands, planning naturally involves restaurants and hotels.

EDUCATING TOURISTS

A similar process applies to the environment. Even if the impact seems slight today, if you are not careful, there is the risk that tourists may be disappointed. They may find the landscape less beautiful than expected, and worse, may not show respect for the environment which is the park's founding principle. Dangers may well multiply: displacing of wildlife, the introduction of exotic plants and weeds, and even, in extreme cases, blatant poaching or vandalism. The park authorities have therefore had to develop an increasingly comprehensive information package for visitors as well as develop ever more sophisticated management practices to preserve park resources. Since visits are seasonal (most visitors arrive during the space of 120 days), many facilities are pressed to the limits either by the number of visitors or by the cold weather of spring and fall as visitors expand the "shoulder" seasons.

Fortunately, 95 per cent of them never venture outside the three to four per cent of the park that is easily accessible. That alone is the best guarantee of the park's health. Encouraging more use of the park's backcountry would undoubtedly place further pressures on the environment.

Despite these precautions, Yellowstone has turned into a virtual industry with several hotels, some 24 food outlets, a hospital, two clinics, garbage-collection services, as well as firefighting services. Reflecting on the development of the 1960's, park officials might now take a different approach. Critics have accused them of being "asleep" in the 1960s. Responding to rapid growth in visitation, many facilities were constructed in a hasty manner using substandard design and materials. Hopefully, we have learned from this experience. In cooperation with the concessionaires, construction in the Park nears $20 million per year, primarily to replace and reconstruct aging facilities. These facilities are being designed to be compatible with their surroundings, efficient in their operation and of service to the park's visitors. In 1980, the park authorities ended its long term contract with its primary concessioner and entered into a new contract with TW Recreational Services, then a subsidiary of Trans World Airlines, which now provides lodging, catering services, gift shops, guided tours, boat and bus tours, and horseback rides.The concession's total annual revenue is between $30 and 40 million, 28 percent of which goes to the park. Another concessionaire earns between $15 and $20 million selling souvenirs and fast food, while a third manages the service stations and a fourth provides medical services. In addition, there are well over 100 companies providing guide and outfitting services in the park.

In 1870, perhaps a dozen scientists visited the park. Since then, the number of visitors coming to admire the beauty of the Yellowstone landscape has risen steadily, reaching more than 3 million annually. Can we expect the park to continue growing to handle 5 million or 10 million visitors, and then as many as 15 million? Probably not. So how do we slow down the influx?

Yellowstone has, by design, limited its accommodation facilities to 1,864 frontcountry campsites, 2,300 hotel rooms and 300 background camp sites. Yet, these restrictions have had other, unintentional, effects: visitors end up spending the night just outside the park, which simply adds to the crowds and traffic congestion around the site, putting more pressure on the park.

The balance of nature must be safeguarded. But if some people have to be turned away, how are we to decide which ones? The questions at stake, which also have ethical implications, yield no easy answers. ■

A VISIT TO OUR COUSINS

Local populations are the losers in Zaire, where political instability has dried up vital tourist revenue from the Kahuzi-Biega National Park - home of the last mountain gorillas.

Rays of green light barely filter through the dense forest. Visitors sink up to their ankles into thick leaf mould. The guide points to an area where the grass has been crushed in some places: gorillas slept there last night, leaving droppings to mark their passage. After another half-hour of laborious progress - sometimes slashing with the machete - we find ourselves face to face, at a bend in the path, with a two-metre tall, 200 kilogram hulk who rushes, bellowing, at the brash intruder. The only thing to do is stand firm and not move. About one metre away, the gorilla halts, satisfied that his charge has been properly intimidating. The guide says a few soothing words in Mashi.

The dominant male turns his silver back and retreats to a corner, casting sidelong glances in our direction and keeping a watchful eye on his small family. Only then can the visitors relax and enjoy the sight of the young playing, surrounded by females and other males - until the next, equally impressive, charge. After about 40 minutes, sensing the male's growing impatience, the guide decides that it is time to bid farewell to the little group.

It is an unforgettable experience for anyone who has been fortunate enough to pay a visit to these close cousins of homo sapiens, living in the mountains between Rwanda and Zaire.

Zaire boasts a 600,000 hectare national park in its Kivu province which, with its humid and temperate climate, seems more like Switzerland than tropical Africa. It is here that the world's last mountain gorillas have taken refuge. Numbering less than 500, they have been forced into retreat by humanity's relentless advance. Mountain gorillas have been hunted for various reasons: for meat; to be sold to zoos (most die very quickly in captivity); or not so long ago, it was in vogue among New York loft-dwellers to hang a handsome male head as a trophy or to display an ashtray made from a gorilla hand. Hunting has a devastating effect on the small groups that make up gorilla society. Once the dominant male is dead, the other males fight for supremacy. As the reproductive cycle is very slow, the winner may kill off the infants so that he can couple more rapidly with the females. Females give birth to only three or four offspring in a lifetime. Thus it can take quite some time for the group to return to its original size. At the same time, agricultural expansion has forced these nomads, who need plenty of space - up into the higher regions.

The creation of Kahuzi Biega Park in 1970, and its entry into the world heritage list 10 years later, grew out of a desire to safeguard a unique environment in a country which has long sought to develop its natural resources. Towards the end of the 1980s more than 3,000 tourists visited the park each year to see the gorillas, reaching a peak in1987with the release of the American film "Gorillas in the mist" (see box).

Park officials have instituted a careful policy designed to protect the gorillas from undue stress. Gorilla groups are carefully prepared for the approach of human beings. The authorities permit only one small group - not more than eight people - to go out each day. *"But,"* notes the head Commissioner, Mankoto ma Oyisenzoo, *"even with these restrictions, we are far from our maximum capacity. We could easily handle more than 10,000 visitors a year."*

TOURISTS TURNED OFF

As things stand now, the Commissioner would be happy to host the 3,000 visitors of the past. In addition to sporadic military rebellions and inter-ethnic conflict, Zaire is in the throes of an economic and financial crisis.

German assistance to the park was cut off with the suspension of European co-operation and, in retaliation, visas are no longer being issued to French or Belgian citizens. Because the park is located in the easternmost part of Zaire, visitors came mainly via the neighbouring countries of Rwanda and Burundi, themselves victims of bloody ethnic conflicts. When the Bujumbura airport was closed for several weeks, the park had no visitors at all. Tourists have little desire to visit a trouble spot, even though the park region itself has remained completely calm.

The tourist revenues were essential to the park, whose administration had instituted a policy designed to rally border populations to the cause of environmental protection. Pygmies are used as guides because of their knowledge of the forest. *"We haven't been content simply to prevent individuals from poaching or chopping down trees in the forest,"* explains Commissioner Oyisenzoo. *"We have spent nearly one fifth of our tourist revenues on micro-projects for the population, including four secondary schools, seven health clinics, about 80 water conveyances and eleven agricultural service roads. You have to remember that for Africans the forest is like a restaurant. Our goal is for the people to say: this is our forest - if we protect it, it will feed us. What will happen now?"*

Nicolas MICHAUX

TOURISM: THE IMAGE AND THE REALITY

Films about natural sites give a shot in the arm to tourism, but they can also provoke undesirable behaviour. The mountain gorillas had their own hour of glory in the film "Gorillas in the mist", the story of Diane Fossey, an American woman who lived with them before she was murdered in Rwanda.

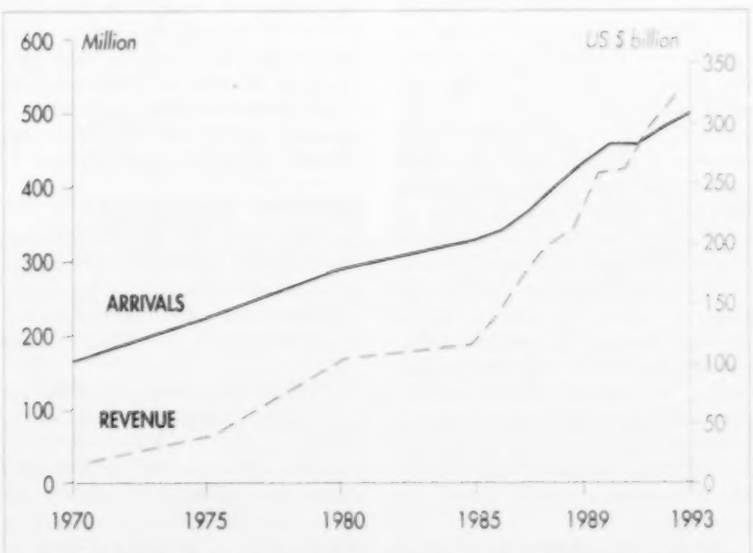
The crew filmed in Rwanda and Zaire but were irked by the restrictions imposed on them by authorities at the Kahuzi Biega Park to keep as far away as possible from the gorillas and not to touch them. In the film, the audience is treated to the sight of actress Sigourney Weaver playing with baby gorillas, which is strictly prohibited under park policy. *"After the film was released, the number of visitors to the park suddenly shot up, in 1987, to 3,500, compared with 2,000 visitors two years earlier"* observes the Commissioner. *"But some tourists insisted on bringing their children, which we could not allow, for their own safety. A very wealthy Frenchman wanted to sign a waiver of responsibility! Others wanted to play with the baby gorillas the way they did in the film; they refused to grasp the fact that they were running the risk of contracting a disease or even being attacked by a dominant male. Some tourists had to be held back bodily to keep them out of danger!"*

ALL ARTICLES ARE FREE OF COPYRIGHT RESTRICTIONS. SEE P.3

TOURISM: A BOOM INDUSTRY

Tourism has taken the number one spot in world trade - ahead of the oil industry - and despite the recession it has continued to outstrip all expectations.

CONSTANT GROWTH



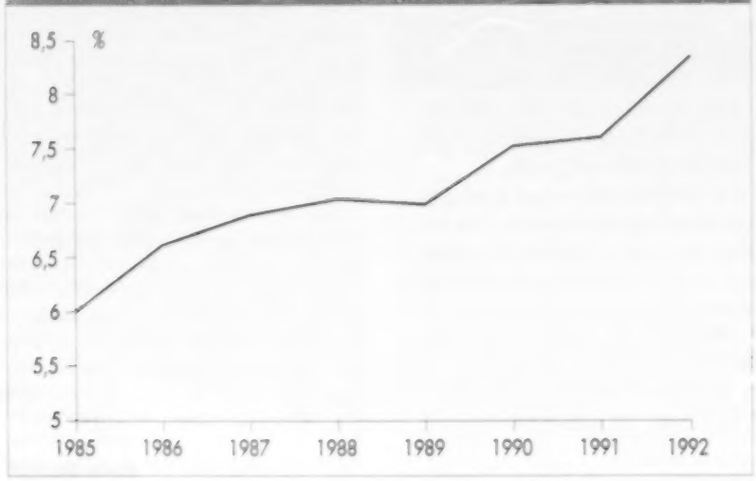
THE GLOBAL DEVELOPMENT OF INTERNATIONAL TOURISM
Source: World Tourism Organization (WTO)

The number of international tourists broke through the half billion mark in 1993. But the boom began well before that. Between 1970 and 1980, tourist numbers climbed from 166 million to 288 million - an increase of almost 75 percent. In 1990 they had swelled by another 60 percent to reach 458 million. According to the World Tourism Organization, 534 million people could be trotting around the globe by 1995 and 661 million by the year 2000.

Tourist revenues (without counting international transport) are even more revealing. In 1970, tourists spent $18 billion dollars. In 1980, this figure topped $100 billion (an increase of 477 percent) and 10 years later reached $250 billion, representing a further increase of 155 percent. In 1993, tourists spent almost $300 billion dollars during their travels.

TOURISM AND WORLD TRADE

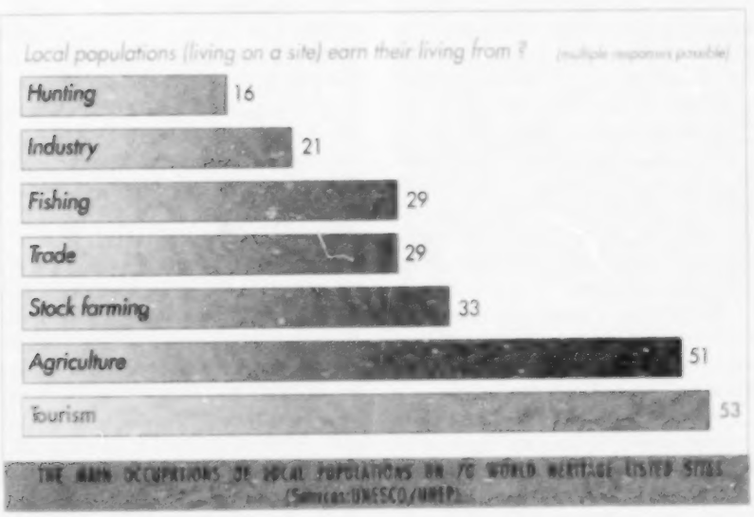
THE CONTRIBUTION OF TOURISM TO EXPORT EARNINGS
Sources: WTO and OMC



Tourism has become a major commercial actor. It is now the world's biggest industry, having recently overtaken oil, which has suffered from falling prices, and accounts for a bit more than eight percent of world trade. However, the benefits are not equally distributed.

Europe takes the lion's share of tourist revenues (52 percent in 1992), followed the Americas (27 percent), East Asia and the Pacific (16 percent). Africa, the Middle East and the rest of Asia are left with the crumbs (one or two percent). France is the world leader, with the USA in second place. However, visitors to new destinations such as Hungary, Hong Kong and Malaysia are rising rapidly.

WORLD HERITAGE SITES: A MONEY-SPINNER

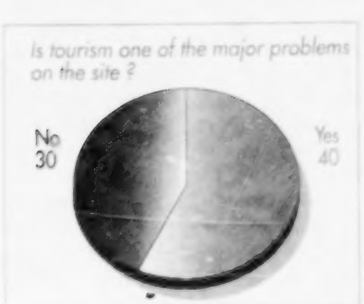


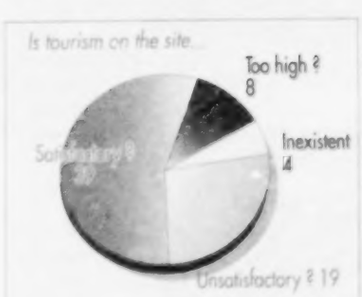
THE MAIN OCCUPATIONS OF LOCAL POPULATIONS ON 70 WORLD HERITAGE LISTED SITES (Source: UNESCO/UNEP)

The graphs on this page are based on the results of an survey undertaken by UNESCO and UNEP, to which 70 sites from a total of 90 natural sites inscribed on the World Heritage List replied. However, their extreme diversity (see p. 8) makes it difficult to draw any general conclusions. The sites that replied to the survey receive more than 40 million tourists annually, and for the most part the numbers are on the rise.

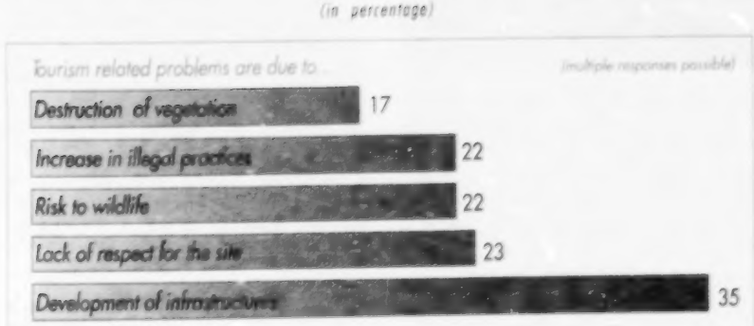
It is also clear in the graph opposite that tourism plays an important part in local economies, on and around the site, taking on even more importance than agriculture.

... AND A SOURCE OF PROBLEMS





(in percentage)


Tourism related problems are due to... (multiple responses possible)
Destruction of vegetation 17
Increase in illegal practices 22
Risk to wildlife 22
Lack of respect for the site 23
Development of infrastructures 35

There is no real complaint from sites about the numbers of tourists, who represent a considerable source of income, except in those cases where there are not enough of them. This is most often the case on African sites that have been deserted by tourists and which are suffering financial difficulties as a result.

Nonetheless, the majority os sites consider tourism a problem - posing a real threat to wildlife and vegetation. A number of parks consider their infrastructure insufficient and one site in three admits to having no particular policy set up concerning tourism. The same proportion has no information centre for tourists, but more than half charge an entry fee, which provides a minimum of control.

Sources: UNESCO/UNEP
Infography : A. Darmon

EVEREST CLEAN-UP: A TALL ORDER

"Mt Everest is our most important symbol and we can't afford to make it the highest junkyard in the world."

In recent years, the peak of Mt. Everest has become an international symbol of spoiled wilderness. Its media-bestowed label of *"world's highest trash pit"* results from the dozens of dead bodies and the 20-odd tonnes of mountaineering debris left on its flanks during four decades of climbing expeditions.

The oxygen bottles, tents, sleeping bags and food packaging have been left on-site because the effort required to bring them down from such altitudes would endanger the climbers lives. Several dozen of the 125 casualties claimed during climbing expeditions have also remained on the mountain. Unlike the European Alps, helicopter rescue attempts are not possible; the air above 6,000 meters is too thin.

Photos of these scenes come as a shock for those whose visions of Everest are of a pristine wilderness beyond human interference. *"Mt. Everest is our most important symbol and we can't afford to make it the highest junkyard in the world. Whatever the risk and investment it is our duty to keep it clean."* says Nepal's Minister for Tourism, Ram Hari Joshy.

Apart from being an eyesore, the accumulation of garbage is indicative of the big increase in the numbers of climbers on Everest - at lower altitudes as well- and their lack of awareness or concern over the impact they have on the environment. On May 10 of last year for example, 37 climbers representing seven expeditions from four countries crowded onto its peak. On the lower slopes the number of tourists annually visiting the Park has reached 16,000. Many of these people trek to the Everest Base Camp on what had become known as the "toilet paper trail", due to the fluttering bits if pink tissue that were strewn across the landscape.

While these numbers may seem relatively small, they must be weighed up against the limited facilities that are provided for visitors in this remote area.

Well aware of the problem, the Government moved to limit the numbers of high altitude climbers by raising their fees from $2,000 in 1991 to $50,000 last year, and has restricted the numbers of expeditions to one per season on each of the four routes up to the summit. The authorities also demand a $4,000 deposit these days to ensure that what goes up the mountain comes down again. *"In the climbing community,"* laments Royer *"where vanity and the quest for glory leave little room for concern for the community, money, unfortunately, becomes one of the best ways of bringing people back into line."*

This money, in turn, helps with park maintenance. In December 1993, for example, the Ministry of Tourism allocated $60,000 to the Sagamartha Pollution Control Project, an organization set up by the Worldwide Fund for Nature (WWF) in 1991, which has successfully cleared the garbage from the Base Camp and cleaned up the trekking routes. So in part, the problem is being resolved - or at least, measures have been taken to prevent the situation from becoming any worse at both high and low altitudes. But what of the debris left at the summit by the previous expeditions?

OPPOSITION

Proposals to clean up the rubbish and recuperate the bodies have, surprisingly, met with stiff opposition - not only from the climbing community, but also from certain environmentalists who believe that *"the litter problem should not be confused with other more serious environmental and social problems in the Sagamartha (Mt. Everest) National Park"*.

The critics cite the exorbitant cost involved, the impossibility to remove any but the surface garbage because of the mountain's continually shifting glaciers, and the high risk to human life. They also charge clean-up aspirants with using ecology as an excuse to raise funds to pay expedition costs, which are expected to soar to $80,000 per climber this year. And after all, the rubbish *"isn't likely to be seen by more than about 50 climbers a year"* says Elizabeth Hawley, executive officer of the Himalayan Trust, which was founded by Sir Edmund Hilary to improve social conditions for the Sherpa residents of the area *"That may be true"* says Royer, *"but that doesn't make the situation acceptable."*

Despite the objections, the appeal to clean up this special mountain is gaining ground. Apart from the government measures and Royer's proposal, three other "spring-cleaning" expeditions have been approved by the authorities this year. Not all have yet found the necessary funds - for although these expeditions receive separate sanction from the Nepalese authorities, they get no reduction in climbing fees.

French climber and guide, Pierre Royer who has drawn up detailed plans for a $750,000 clean-up operation that will also provide training for a Nepalese rescue force specialized in security operations at very high altitudes agrees. *"I was absolutely staggered the first time I saw the extent of the debris at South Col (where each expedition sets its last camp before the final assault on the summit)."*

Patricia ROBERTS, Kathmandu
and Sue WILLIAMS

A CASE OF GIVE AND TAKE

Australia's Great Barrier Reef has been described as a model of its kind, managing the tricky balancing act between conservation and tourism. But authorities must remain vigilant...

The giant turtle is almost at the end of her journey. She has swum thousands of kilometers and escaped the sharks of the Indian and Pacific oceans. Perhaps she travelled from Indonesia or New Zealand. Like thousands of her sisters she has come to this coral island off the coast of Australia to lay her eggs in the warm sand of the beach. It is an arduous task. She lays about a thousand eggs each year, but the experts estimate that only one in five thousand of her newly-hatched baby turtles will reach adulthood. The life expectancy of most is only a few minutes, just long enough to clamber out of their sandy nest and dash down the beach to the waiting throngs at crabs and birds - or if they make it to the water, predatory fish.

Nevertheless, once she has arrived at this spot, Heron Island on the Great Barrier Reef, our turtle has reached journey's end.

Clumsily, under cover of night, she crawls laboriously up the beach to dig her nesting hole. A couple of strollers pass close by. Instantly she takes fright, turns back and plunges into the sea again. She will not lay her eggs tonight.

The incident is insignificant in itself but it is a good demonstration of the fact that, even unintentionally, the presence of tourists in the wild inevitably disturbs living creatures. A little further down the beach other walkers guide their footsteps with a pocket torch. Yet there are signs up everywhere explaining that the use of lights must be avoided because they disorient the turtles.

VENERABLE LADIES

These venerable ladies are not the only creatures affected by the presence of humans. The coral unavoidably suffers from the repeated presence of divers who come to admire its brilliant colours and forms, and the myriad of fish life that lives there.

The Great Barrier Reef, a necklace of islets strung for 2,000 kilometres down the east coast of Australia, off the State of Queensland, is *"the only form of life on earth that is visible from the moon"*, as the advertising slogans say. Home to more than 250 species of coral and some 1400 species of of fish, it has been a national park for a long time and became a World Heritage site in 1981. It receives more than 2.5 million visitors a year and the number is constantly increasing, even if it is relatively small in comparison with the immensity of the site: nearly 350,000 km², or three-fifths the size of France. Tourist revenues in 1987-88 were estimated at US$200 million. It is the biggest coral reef in the world, built by vast colonies of tiny animals called polyps. They are extremely fragile organisms that can take a long time to regenerate. Simply touching them injures their protective layer and may kill them. The anchors of boats can cause considerable damage. Off Heron Island is an underwater site called Gorgonian Hole. *"Four or five years ago there were still superb sea-fan corals there. Now there are none left"*, recounts Dale Loader, an underwater photographer who dives regularly along the reef.

A small hotel complex was built years ago on Heron Island (replacing the original turtle soup factory!) and is run by the British multinational P&O. It obviously has a considerable impact on the environment of this coral cay that covers just a few hundred square metres. The complex catered for 68,000 visitors last year of which some 20 percent were scuba divers.

Manager Rob Rogers maintains that the hotel and all of the services it offers conform to *"extremely strict standards. The resort has a desalination plant and generates its own electricity. Nothing brought onto the island stays on it. Waste is frozen and shipped to the continent in cubitainers,"* he says, stressing that all this *"costs a lot: it's very hard to run it in a way that respects the environment."*

SEPTIC TANKS AND SEAGULLS

"It wasn't always that way", recalls Col Limpus, Research Director of the Queensland National Parks and Heritage Department. *"Previously the hotel went ahead and dumped its waste into the sea, which attracted the local fish and sharks. We had to get angry..."*

To be fair, nowadays the holiday complex gives out plenty of information and warnings, taking special care to tell guests not to feed the wildlife (the tiny island is also home to more than 100,000 seabirds of several varieties). Relations between the national park and the club managers are now quite good, although inevitably there are differences of opinion. Decisions are usually made after joint discussions where everybody has a say.

"Tourism has practically no impact on most of the Great Barrier, which is still almost totally wild," stresses Col Limpus, who at age 52 has been studying the reef for 30 years. *"But locally the problem can be very different. At Green Island, for example, the hotel's septic tank caused infiltrations of bacteria into the reef."*

Ecosystems can be upset *"very rapidly"*, he says. *"The reproduction of a turtle can be badly disturbed when she has 500 tourists standing round her when she's about to lay her eggs. Or else people feed the seagulls, which come in flocks and then*

attack the smaller birds." He believes the core of the national park, especially the most valuable sites with the rarest species or the largest concentrations of animals, should stay off-limits to tourism. This caution seems all the more necessary to him because whole areas of knowledge about how wild animals live are still little understood.

SAND TEMPERATURE AND TURTLE SEX

"Look at the buildings on this island. They were put up a long time ago, on the sunny side. At the time it was not known that the sex of baby turtles is determined by the heat of the sand. As a result, 40 percent of the warm sand beaches, where females are born, were wiped out, creating an imbalance in the turtle population. Similarly, the access channel to the jetty was dug through the reef against common sense, to put it nicely, by people who knew nothing about sand movements. As a result, at low tide all the water drains off the reef into the channel, bringing with it large quantities of sand and causing serious erosion of the island. And we can't reverse it, there's no question of filling in the channel and rebuilding the reef with something as hard as coral."

Col Limpus nevertheless advocates leavening a firm policy with some concessions. *"It's not enough to impose bans. Take the ban on shell gathering, which is a general rule. There are passionate shell collectors all over the world."* And as the national park authorities cannot keep an eye on everything, they have chosen one place, Wilson Reef, where collecting is allowed. This way the impact is limited and monitored. *"It should not be forgotten that the people who come to these parks are voters. If they are simply kept out, they may become hostile to the whole principle of conserving the environment"*, he warns.

In its report on the state of the world environment from 1972 to 1992, the United Nations Environment Programme gave good marks to the Great Barrier Reef park, describing it as a model of its kind. *"The state agency that runs the park has developed a zoning policy that enables it to conserve some parts of the reef and sets the rest aside for other purposes. The zones range from virtually unrestricted areas to zones that are closed except to scientific researchers."* For some time now large-scale building has been restricted in areas liable to receive large numbers of tourists because they are near urban centres.

"In most areas licences must be granted to the tourism industry only after a thorough environmental impact study. Any risk of harmful effects must as far as possible be eliminated or reduced to a non-harmful level. A monitoring programme, run by the park but paid for by the tourist operator, enables the impact of the project to be scrutinized. In the case of buildings, supervisors appointed by the park have the power to halt work if standards set to protect the environment have not been met. Other measures are taken, including bank guarantees and insurance, so that if construction work is stopped, the park will be able to either complete the building or reclaim the site."

PLENTY OF HEADACHES

Despite these precautions, Col Limpus expects *"plenty of headaches"* in the northern part of the Great Barrier, which is still almost wilderness. He is afraid that *"sea avenues"* will be opened to bring tens of thousands of visitors to those fragile sites. *"For an island like Heron, the distance from the continent (more than two-and-a-half hours by boat) helps to keep the flow of visitors under control. Up there the islands are close to the coast. If we don't watch out, if we don't limit the numbers, it's going to be horrible."*

After a long study mission in South-East Asia, he can testify that *"the demographic pressure there is so great that the problems at natural sites are very acute. And of course that applies to tourism, which is taking on massive proportions in countries like Thailand and Malaysia. There are too many people, quite simply too many people."*

Nicolas MICHAUX
and Sue WILLIAMS
Heron Island

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TO FIND OUT MORE ...

THE WORLD HERITAGE: a richly illustrated fold-out brochure explaining how the World Heritage Convention and List work, and incorporating a complete list of sites.

THE WORLD HERITAGE NEWSLETTER: published by the World Heritage Centre, presents a run down of events and activities being undertaken by the centre, as well as articles on issues concerning heritage sites, including tourism, which is featured in last December's edition (No.3).

GREENWATCH: published in each edition of the UNESCO Courier. The upcoming April edition will feature an inquiry into national parks and the dilemma posed by tourism.

UNESCO SOURCES No. 39 (July-August 1992): **The World Heritage Convention, 20 Years Later.**

THE WORLD HERITAGE SERIES: co-published with the Children's Press, Chicago, presents three titles dealing with natural heritage: **Great Animal Refuges; Coral Reefs;** and **Tropical Rainforests of Central America.**

INDUSTRY AND ENVIRONMENT: published by the United Nations Environment Programme (UNEP). See issues no. 3-4, vol. 15, of July and December last year for articles on sustainable tourism, including a contribution from UNESCO on tourism and world heritage as well as several case studies. (UNEP, Tour Mirabeau 39-43 quai André Citroën, 75739 Paris Cedex 15 France).

STATISTICS ON THE EVOLUTION OF WORLD TOURISM (extracts of which are published on pages 12-13) are available in a series of pamphlets published by the **World Tourism Organization** (WTO, Capitan Haya 42, E-28020 Madrid, Spain).

Help improve site management and put a stop to smuggling

Shirakami in Japan, which had its first four sites inscribed on the World Heritage List in December 1993 (Photo J. Thorsell/IUCN).

You can contribute to the purchase of:

- **research equipment**
- **vehicles**
- **binoculars**
- **walky-talkies, etc.**

Send your donation for the WORLD HERITAGE FUND to: UNESCO, World Heritage Centre, 7 place de Fontenoy, 75352 Paris 07 SP, France (cheques should be made out to UNESCO). Contributions go directly to projects, the operational costs of which are met by UNESCO.

FAMILY MATTERS

"Families are the building blocks of our world ..."

The family is dead, long live the family. Marriage might be declining in the industrialized world and cohabitation may be on the rise; the nuclear family may be on the way out and *"hybrid families"* on the way in; an increasing number of women may be choosing to have children out of wedlock and on their own. But despite these changes, the experts agree, the family as an institution is alive and well, albeit evolving into an increasing variety of forms.

In Sweden today about half of all births take place outside of marriage, a trend that can be seen all over Europe. The image of the Italian mamma surrounded by a flock of bambinis has all but disappeared - especially in northern Italy where women are beating all the records for not having children! In the developing world, where economic difficulties oblige the men to seek work far from their homes, sometimes in a different country altogether, women-headed households have almost become a norm. In rural Lesotho, for example, 70 percent of households are headed by women, whose husbands have been lured to the gold mines of South Africa. In Barbados, the figure is 44 percent.

THE BEST AND THE WORST

Although these developments mark the changing nature of human societies, and have often come about because of various types of conflict, pain and hardship, the family remains the most basic, and perhaps the most important of human institutions. That is the message from two of UNESCO's activities marking the launch of this International Year of the Family: an international colloquium examining the different trends in family development in the West and new fields for research, held at Headquarters from January 19-21; and the publication with Gaia Books of "Families: Celebration and hope in a world of change" - written by anthropologist Dr. Jo Boyden (see p.4) and presenting *"a portrait - in words, photographs and maps - of the conditions and concerns experienced by families across the world at the turn of the twentieth century".*

"Families bear the brunt of humanity's troubles" writes Boyden. *"At their best, they make a profound contribution to the health of society and its individuals: preserving culture, values, ethics and wealth; defending the weak; carrying out the great unpaid work of the world. At their worst, they resist change, restrict individual freedom, and indulge in prejudices that can lead to conflict. Their power to reform and reshape human minds is forever being rediscovered. Good or ill, we cannot do without them - they are the building blocks of our world."*

DIVERSITY

Participants at the colloquium agreed that in the West, one of the major changes over the past 20 years has been the recognition and acceptance of different types of families. *"Just 15 years ago in France, for example, certain forms of family, such as a single woman with a child, were considered illegitimate, while children living with step-parents, or who simply did not have a stable family background were severely stigmatized,"* says French researcher Claude Martin. *"Today all of this is considered as relatively banal. Teachers and other social actors are far less likely now to judge a child because it does not come from a 'classic' family set-up.*

"It is also important to note that this recognition has also been made at an official level. Civil and family law has considerably evolved."

Two contributing factors to these developments have been contraception and the changing role of women in Western society. Statistics presented to the colloquium showed that throughout Europe there has been *"an explosion"* in the number of women now working. In France again, for example, the number of women holding jobs jumped from 6.6 million in 1962 to 11.1 million in 1990, while the number of active men climbed by only one million to 14.2 million in the same period. Across Europe, two thirds of women are now part of the workforce, and, unlike the situation in the 60s, they do not leave their jobs to raise their children.

One spin off of this has been a greater demand for fathers to participate in child rearing. Although research in the industrialized world shows that mothers still spend far more time with their children than fathers, the situation is beginning to change and the new category of *"care-giving father"* is beginning to emerge. Boyden cites a 1979 study in the UK, which showed that

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Extra-budgetary funds are being sought to finish UNESCO's 5-volume **ATLAS OF BAROQUE CULTURE**, being undertaking in the framework of the "Baroque World" project. Volume I and II of the Atlas, now in preparation, illustrate the unity and diversity of the Baroque civilization which developed worldwide in the 17th and 18th centuries. An illustrated 25-page brochure is available to Governments, institutions and other interested donors in English, French and Spanish.

☞ *Section of Cultural Identities and Intercultural Exchanges*

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FROM THE COTTON FIELDS OF MISSISSIPPI to the N.Y. Stock Exchange, from the homeless, to scholars and athletes, poets, painters, dancers and doctors, African-American photojournalists chronicle the experience of their people in 45 photos from the book "Songs of My People," on view at Headquarters from January 14 to 21. During the show, marking the 65th anniversary of **the birth of Martin Luther King**, a 30-minute video retraced the 1963 march during which King pronounced his famous phrase: *"I have a dream."*

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only five percent of first and second-time fathers did not participate in the care of their one-year-olds, whereas in 1959 this figures was closer to 70 percent.

Sweden is a good example of these new *"father-friendly"* countries, writes the anthropologist. *"Swedish parents may take two months antenatal maternity leave, 10 days paternity leave, and a further 12 months parental leave which is paid just below current income. The couple divide their leave as they wish, although only one parent can take leave at a time. In addition, parents can take time off to care for sick children."* Although few couples have the courage to switch roles completely, Boyden suggests that it is a choice that many parents nowadays seriously consider.

This change is women's social position has not been mirrored in the rural societies of the developing world, where mothers remain the chief providers for their children.

The increasingly absent father, obliged to work far from his family, has meant that the womens' workload is heavier than ever. They must not only look after their offspring and take charge of all domestic tasks, but must also look after the family crops and collect firewood and water which can entail walking several kilometres every day.

Apart from the growing number of female headed households in developing countries, research carried out for UNESCO has shown a tendancy towards the nuclear family, but an end to its adoption as an ideal. *"In Africa, for example, one in four families are now nuclear"* writes Djamchid Behnam in "Le Devenir de la Famille" (UNESCO, 1992), and it is the low-income households in urban areas that tend to become 'nuclear' *"while the trend for those better off is towards the traditional extended family."* Even then, points out Benham, the African nuclear family can either be monogamous or polygamous, including the husband, his wives and their children.

Similarly in Asia, families may be shrinking but they remain faithful to traditional structures. In China, the family home can provide a roof for three and sometimes four generations. In contemporary India, writes Benham, *"the family core is increasingly restricted to the essential: the husband, his wife and children, an aging father or his widow, a brother or sister and an uncle or aunt."*

Thus the family also plays an important role in the preservation of cultural identity. For indeed the family is a refuge - everywhere. It is also the key to social integration, says Claude Martin. *"Despite the various forms that the family can take today, there remains a vital link between its members that serves as a sort of 'social anchor'. The loss of these links leaves the individual in an extremely vulnerable position.*

"And research has shown that society's most deprived members are usually characterized not only by their economic fragility, but also by a lack of family support.

"The family is the most fundamental resource for human society" concludes Boyden. *"Politicians searching for the 'big idea' would do well to recognize that strengthening families, and supporting parents in their most significant role, is an investment in the future of society as a whole."*

Sue WILLIAMS

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MORE THAN $13 MILLION IN UNESCO COUPONS were made available to Member States in 1993, bringing to $362 million the total value of coupons distributed since this programme was created in 1949 to help countries with non-convertible currencies import educational, scientific and cultural materials.

The six categories of coupons, worth from one to $1,000 each, can be bought in national currencies, from authorized distributors, and sent with their order by users to the institution or manufacturer of their choice for the purchase of publications, audio-visual materials, scientific equipment, lab instruments, etc. In 1993, the principal beneficiaries were Ghana, followed by the Republic of Korea, Algeria, Nigeria and Brazil.

☞ *UNESCO Coupon Programme Section*

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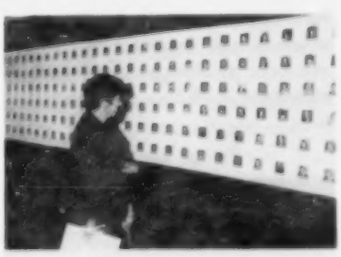
A THOUSAND WOMEN or a thousand photographic portraits brought together in one gigantic mosaic grouping by the French painter Pierre Maraval were on exhibition at UNESCO Headquarters, Paris from 2 to 20 January.

Measuring 40 meters wide and 1 meter tall, this monumental work celebrates the rise of modern day women; famous or unknown representing differences of race, colour, culture and nationality.

Each photo is ascribed an adjective chosen by the woman in the portrait itself. Together, these descriptions form an eloquent and poetic text, which has been transformed into a recently published Art Book.



(Photo UNESCO/Inez Forbes).

NO TIME TO LOSE

Experts meeting in New Delhi tackle the sensitive question of AIDS education in Asia.

No, we will not wait for the cloud to burst upon us. We will act now. On returning to our countries we will launch action plans to put AIDS firmly and swiftly on the school agenda. If that means training teachers, developing curricula and chalking out a clean written policy on AIDS, we will do it. It was on this positive and promising note that the five-day Asian Regional Planning Seminar on AIDS and Education Within the School System ended in New Delhi on January 14.

AN INFORMATION CAMPAIGN IN THAILAND (Photo Médecins Sans Frontières).

Those who made these commitments were education planners, heads of school curriculum units, deans of teacher training colleges, members of AIDS Control Programmes and NGOs in their respective countries. They belonged to varying social and religious backgrounds that had divergent views on AIDS education; to education systems where AIDS found no mention and to systems (as in Myanmar, Thailand and Malaysia for instance) where the teaching of AIDS already figures in one form or other in the curriculum. They came from countries where the prevalence of HIV is now a serious matter and from those where it has not yet assumed threatening proportions. But, confronted with the rapid spread of the virus in the general population, after being confined in the initial period to high risk groups, and with the simple, deadly fact that AIDS always kills, delegates vowed to move quickly on preventing AIDS education in schools.

In several cases this is easier said than done. AIDS might be, as Dr. John V. Kingston, Director of UNESCO's New Delhi office said at the opening of this UNESCO seminar held in collaboration with the World Health Organization (WHO) *"a very democratic disease"*, affecting rich and poor, different ethnic groups and cultures alike but it also happens to be a very difficult disease to talk about since it hinges on two extremely sensitive issues: *"sex and death"*.

Introducing it into the curriculum, whether in the context of science education, physical education, social science or family life education will be no easy task. Standard excuses made by schools, said Mr. Allan Kondo, UNESCO Regional Population Education Adviser in Fiji, were *"an already overloaded curriculum"*, *"it is the parents' duty"* and *"it is against our culture"*. Talking of AIDS, then, in the words of Prof. S. S. Salgaonkar, Director, Maharashtra State Council for Educational Research and Training, India, is *"a matter of building a climate. We have to take the parents and the community into confidence."*

That climate needs to be created, of course both within and outside the school. According to WHO projections, by the year 2000 a total of 30-40 million men, women and children will have been infected with HIV since the start of the pandemic. This is a doubling or tripling of the present total in just seven years. And as for the one million persons newly infected in the first half of 1993, nearly half are adolescents and young adults.

ENVIRONMENTAL, FINANCIAL AND POLITICAL JOURNALISTS from small states in the Caribbean, the North Atlantic and the Pacific and Indian oceans attended a UNESCO supported workshop in Jamaica from January 20 to 22 to prepare for the **UN GLOBAL CONFERENCE ON SMALL ISLAND DEVELOPING STATES,** slated for Barbados next April. The workshop defined and clarified issues, including the best ways to attract attention and assistance in overcoming the problems these nations face due to their small size, limited resources, geographic isolation, economic and environmental fragility, and not least the prospect of global warming and sea level rise.

"MAKING SURE CHILDREN LEARN" is the title theme of UNESCO's Quarterly EFA 2000 on Education for All, No. 13. The International Consultative Forum on Education for All meeting in New Delhi, India last September focused its discussions precisely on this issue and recommended that Governments and

Funding Agencies redouble their efforts in order to correct the various structural, financial and educational difficulties which limit progress in this area.

Hence the urgency to inform, for if AIDS can kill, it can also, to a large extent, be prevented. Hence also the call in the consensus statement, for *"responsible behaviour and value orientations"*. All agreed that the march of the disease had been shrouded in misconceptions. In the absence of any clearheaded information policy, *"the only source of learning for the young"*, as Dr. Shankar Chowdhury, UNESCO's National Expert on AIDS explained, *"is cheap literature - which is unreliable and often wrong - and peers. We need to counter fear and discrimination and be forthright yet sensitive. Moreover, we need to inculcate a positive attitude towards people infected with AIDS and at the same time explain how the disease is not transmitted."*

A moot point for discussion was **when** to begin informing children about AIDS and **what kind** of information to impart. Should this be accompanied by co-curricular activities? Via which school subjects should the message be conveyed? Dr. Mariella Baido who works with the WHO's Global AIDS Programme, was of the view that children had to be informed before they left school. This could even be as early as the primary level (when many dropped out) since there would be little opportunity to do so later.

In any case students had to be awakened both to the danger and to preventive measures before they became sexually active.

Apart from the formal classroom situation, other channels are also being tried out: girl and boy scouts, youth organizations, and extra curricular activities. One NGO in Indonesia has been training secondary school children over weekends. Other strategies include placing multiple copies of an information booklet in the library of a school which lacked a formal mandate to talk about AIDS. These were avidly read by students; another was peer-teaching by teachers during in-service training; yet another was the involvement of the students themselves at the pre-testing and testing stages when prototype materials were being developed, and the incorporation of their queries into the final package. Ready-to-read out printed lessons have also been drawn up in some Pacific Island countries for teachers who feel unqualified or diffident.

An interesting and highly constructive aspect of UNESCO's project on preventive AIDS Education in some Pacific Island countries was the night meetings held for parents to explain the content and rationale behind the new move. So successful was the effort that parents themselves became support groups and were pleading by consensus that their children learn of AIDS in school. And an evaluation done in at least two countries demonstrated clearly that students exposed to AIDS education showed greater compassion and empathy for those with the disease, they were less inhibited, livelier and more interactive.

DENIAL

One major handicap in the battle against AIDS was the ingnorance or denial about a country's sexual behaviour. Since people and government often fight shy of admitting early sexual activity or promiscuous practices among their citizens, the teaching of AIDS is given low priority.

But burying its head ostrich-like in the sand is clearly self-defeating for any government. Dr. Ko Ko, WHO Regional Director in New Delhi reminded his audience on the opening day of the seminar that the impact of AIDS is felt not only on the health of a country but on its socio-economic development as well, for the virus generally attacks people who are in the most productive period of their lives.

For Bangladesh, Korea, Philippines, Indonesia, Malaysia, Myanmar, India, Pakistan, Nepal, Sri Lanka, Vietnam and Thailand, the written policy they intend to work on will form the basis of a National Action Plan. It will involve Ministries of Health and Education, NGOs, teacher, parent and student organizations, political and religious leadership and the private sector as well. Delegates agreed that techniques such as inter-active learning and distance learning - and audio-visual where possible - be used and that the AIDS education programme be effectively monitored and evaluated.

"This seminar", said Sonia Bahri, Programme Specialist, Education for the Prevention of AIDS, UNESCO, *"demonstrated a real commitment. And that itself is a major step."*

Latika PADGAONKAR
New Delhi

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THE FIRST OVERLAND INTERCONTINENTAL CAR TOUR left London on 27 December 1993 and is expected to reach New York on 31 March 1994. Jointly sponsored by UNESCO, the United Nations and the United Nations Environment Programme, the caravan of eight vehicles will cross nine countries and cover more than 25,000 km. Known as the "Ford London-New York Overland Challenge", the trip is organized by the East-West Creative Association which through this effort seeks to arouse public opinion in favour of the defense of the environment. The tour paid a courtesy visit to UNESCO Headquarters in Paris on 29 December 1993 where support was

PRESIDENT OF THE EAST-WEST CREATIVE ASSOCIATION, R. CREASEY (Photo UNESCO).

reiterated for UNESCO's "Youth Reconciliation Team" whose members include both an Israeli and a Palestinian driver.

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AFRICAN MANGROVES are the subject of a report just published in the collection "Mangrove ecosystems technical reports" under UNESCO's Coastal Marine Africa (COMARAF) Project. The 267-page report is devoted to the *"conservation and rational management"* of mangroves in 17 countries, representing 90% of Africa's mangrove forests. Mangrove ecosystems can influence climate and protect coastal areas from erosion and cyclones. They also provide wood for fuel, housing construction, medicinal plants and edible animal species for coastal populations, as well as providing them with diverse sources of income.

☞ *COMARAF, UNESCO/BREDA, 12 Av. Roume, BP 3311, Dakar (Senegal).*

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Earlier this year, the IOC launched a **SURVEY ON SEAGRASS BEDS**, research, management and training. A questionnaire was sent to laboratories and institutions worldwide interested in these beds which play a unique ecological role in coastal waters. The survey has already yielded information on courses, workshops and grants, etc. for 1994. For a list of these activities, and for those who did not receive it, a copy of the questionnaire, contact: Seagrass Survey, IOC, UNESCO.

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Seventy-two representatives of UNESCO Clubs from Benin, Burkina Faso and Togo participated in a symposium on the theme ***"SLAVES IN THE RECEIVING COUNTRIES"*** organized by the UNESCO Club "Friendship and Peace" of Cotonou (Benin) in Grand-Popo from January 14 to 16. Parallel to the UNESCO-sponsored meeting, a cultural festival brought together artists, musicians, and theatre groups from the different Clubs. One of the chief outcomes of the meeting was creation of a special fund to finance construction of a memorial to victims of the slave trade.

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UNESCO has allocated $100,000 to launch an international campaign for the rebuilding of **THE NATIONAL AND UNIVERSITY LIBRARY OF SARAJEVO**. The bulk of this initial contribution will be used to provide the library with the most urgently needed books: dictionaries, encyclopedias, scientific periodicals and works on the history of the country. A quarter of the sum will go towards setting up an international commission of experts responsible for planning and coordinating action aimed at reconstruction of the Library and reconstitution of its collections.

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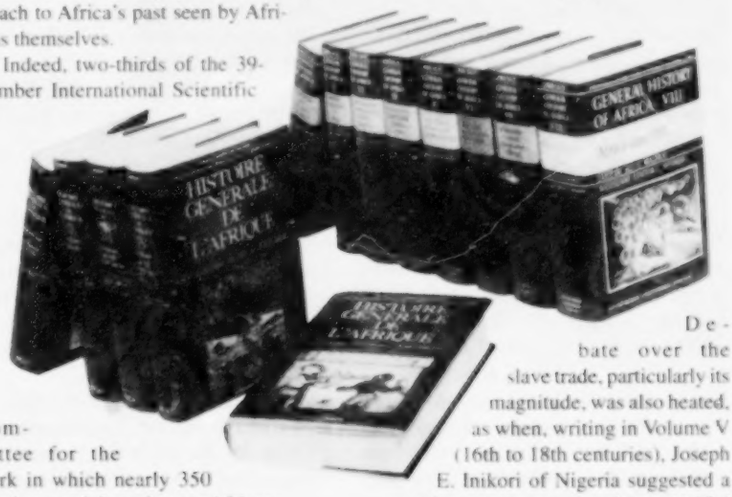
INTO AFRICA

Just-completed "General History": a new look at Africa's past.

Publication of Volume VIII in English of the *General History of Africa* marks completion of one of UNESCO's most important projects of the last 30 years. Launched in 1964 in the wake of decolonization (between 1960 and 1964, 27 African countries joined UNESCO) the History reflects a new approach to Africa's past seen by Africans themselves.

Indeed, two-thirds of the 39-member International Scientific Committee for the work in which nearly 350 scholars participated, were Africans.



One of them, Christophe Wondji (Côte d'Ivoire), Chief of UNESCO's Section for General and Regional Histories, explains why the project, set to last 10 years (1965-1975), has taken almost three times longer.

"First of all, refining methodologies to develop an entirely new historiography, took far longer than expected," he said. *"Since most of African history was in 'outside' sources, it was mainly a question of amalgamating these with 'inside' sources - notably archeology and oral tradition."*

Then there were controversies. On *"The Peopling of Ancient Egypt"* in Volume II, for instance, Cheikh Anta Diop of Senegal offered a mass of evidence - from physical anthropology and linguistics (*"Wolof,"* he said, *"was perhaps as close to ancient Egyptian as Coptic"*) to imagery showing the Negro traits of Cheops, Ramses II, the Sphinx, etc., as proof that the ancient Egyptians were black.

"Of course, if you accept the theory that ancient Egyptian civilization was the work of Black Africans," Prof. Wondji said, *"you get a new reading of history. Africans are no longer barbarians."* He stressed, however, that *"to avoid dogmatism the editors made an effort to indicate the state of knowledge, important lines of research and differences of doctrine and opinion."* Indeed, a note in Volume II made clear that the opinions of Prof. Cheikh Anta Diop *"have not been accepted by all the experts."*

Debate over the slave trade, particularly its magnitude, was also heated, as when, writing in Volume V (16th to 18th centuries), Joseph E. Inikori of Nigeria suggested a 40 per cent upward revision - to 15.4 million - of earlier figures for the Atlantic trade (1500 to 1890) and revaluated its consequences, in terms of prosperity for Atlantic economies and the disastrous stunting of African development.

Prof. Wondji is particularly enthusiastic about Volume VIII (since 1935) for which he was Assistant Editor. *"This was a great period of awakening,"* he said, *"as the invasion of Ethiopia focused attention on Africa, and the struggle for independence, decolonization, the birth of Pan Africanism, and opening onto the rest of the world, brought a new sense of identity."*

An exceptional research tool, or just plain good reading, each 800 to 1000-page volume contains illustrations, maps, graphs, an extensive bibliography, an index and often a glossary.

"The problem now is to finish publication of the other language editions, notably French and Arabic," said Prof. Wondji. Because of rising costs, this means finding financial help from organizations and individuals who would like to be associated with this monumental work.

Betty WERTHER

TEACHING SCIENCE

The Delors Commission looks at what should be taught and how.

"If developing countries are to strengthen economies, open up to market forces and strengthen societies," pointed out Venezuelan sociologist, Marisela Padron, *"then they must possess a scientific establishment that can produce new technologies to develop competitive capacities."* Creating this scientific establishment means providing sound education in science and technology - from primary school through to the university. But what should be taught and how?

Such was the question up for debate at the latest session of the International Commission on Education for the 21st Century, held at headquarters from January 12-15.

Several distinguished scientists from different parts of the world were invited to contribute their thoughts, including biochemist Jorge Allende (Chile), physicist Nicolas Delone (Russia), biologist François Gros (France), astrophysicists Pierre Lena (France) and J.L. Narlikar (India), and mathematician Sakhir Thiam (Senegal).

At first glance the problem appears to be one of dissemination. *"Ninety six per cent of new knowledge emanates from the developed world"* pointed out Zimbabwe's Minister of State and Commission member, Fay Chung. However, apart from making this knowledge accessible to all, the populations of developing countries must overcome what was perceived by the participants as a widespread lack of confidence in science, which is seen as a symbol of imported Western modernism demanding a break with cultural heritage.

Even in the developed countries, said François Gros, *"science has been accused of not fulfilling its mandate"* and that the general public has *"profound doubts"* about what it can achieve.

CULTURAL CAPITAL

Turning this situation around requires a major rethink of teaching methods and even the education of teachers. *"Eighty per cent of students who want to become primary teachers in France have exclusively literary training"* Pierre Lena reported. Even more importantly, cultural values must be integrated into science teaching in an effort to make the subject more relevant for students. Professor Thiam explained, for example, how Senegal's caste system has an inbuilt science education. In the tradesmen's caste, he said, children of jewellers or blacksmiths are taught how to recognize different metals, how to make alloys, how to distinguish types of coal or acid required for working with metals and how to make various crystals. *"This important capital is not taken into account and used as a learning tool at school"* Thiam said.

Likewise, the importance of language was also underlined. Pierre Lena cited a study in which 400 teachers from French universities were asked to name the five most important things that first year physics students required to succeed. *"An overwhelming majority"* he reported *"said that the most essential pre-requisite for physics was an ability to read and write well in French. In other words the student needed to fully master his or her language."*

Relevant curricula, inclusion of the cultural dimension, improved teacher training, the popularization of science and the teaching of the history of science were all dealt with during these four days of intense discussions, the conclusions of which will be included in the Commission's final report to be published at the end of 1995. But perhaps the most enigmatic comment of all came from Ms. Aleksandra Kornhauser, Director of the International Centre for Chemistry Study in Ljubljana (Slovenia), who, recalled that *"few great scientists had ever been good students"*. Is there then a secret ingredient?

Sue WILLIAMS

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About 80 percent of the estimated 200 million children with disability are living in developing countries and very few receive good health care and education. **EDUCATING CHILDREN AND YOUNG PEOPLE WITH DISABILITIES**: Principles and the review of practice, a new 64-page brochure by Seamus Hegarty, Acting Director, National Foundation for Educational Research (U.K.) raises important issues linked with integration of children with special needs (disabled) into mainstream education and discusses different solutions. Available in English, Arabic and Russian, Spanish and French upcoming.

☞ *Division of Basic Education*

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The Bureau of UNESCO's ***INTERNATIONAL BIOETHICS COMMITTEE*** (IBC) met at headquarters on January 28 to select the themes to be dealt with at the Committee's next session scheduled for September 20-22 in Paris. Three main themes were chosen: the relationship of population genetics to demography and development; the therapeutic applications of genetic research; and genetic screening and individual genetic testing, and whether these constitute and element of freedom or source of constraint.

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LOOKING AHEAD

The first meeting of **EAST ASIAN BIOSPHERE RESERVES** will take place in China, in Beijing and also in the Wolong Nature Reserve in the Central Chinese Sechuan Province, from March 13 to 23. Specialists from China (10 Biosphere Reserves), Mongolia, North Korea, South Korea, with one each, and Japan (4 reserves) will, notably, elaborate a cooperative scientific programme. **THE CULTURAL HERITAGE OF VIET NAM** will be the object of a number of events during this period: from March 15 to 18, in Hanoi, about 50 experts will attend a seminar on the Safeguarding and Revitalization of traditional performing arts, oral traditions, languages, etc. as part of the **INTANGIBLE CULTURAL HERITAGE OF MINORITY GROUPS IN VIET NAM**. Another meeting, in Huê from March 21 to 24, will be devoted to the Protection, Conservation and Revival of **THE INTANGIBLE CULTURAL HERITAGE IN THE REGION OF HUE**. Finally, from March 28 to April 2, about 30 experts will attend a seminar to consider **URBAN DEVELOPMENT AND PRESERVATION OF THE CULTURAL HERITAGE**, to be held partly in Huê, partly in Hanoi. March 21 will be celebrated throughout the UN System as International Day for the **ELIMINATION OF RACIAL DISCRIMINATION**. From March 21 to 25, in Hamburg (Germany), a symposium on **PARTICULATE MATTER IN RIVERS AND ESTUARIES** will be organized by the University of Hamburg in collaboration with UNESCO. The 4th Ordinary Meeting of the Intergovernmental Commission for the **WORLD DECADE FOR CULTURAL DEVELOPMENT** will be held at Headquarters from April 11 to 15. A meeting of the joint UNEP/IOC **CARIBBEAN ASSESSMENT AND CONTROL PROGRAMME FOR MARINE POLLUTION** (CEPPOL) in San Jose (Costa Rica) from April 11 to 13, will be followed by an International Symposium on the same subject from April 14 and 15.

OUR NEXT ISSUE will focus on **INTERNATIONAL CONVENTIONS** adopted under the auspices of UNESCO. Our dossier will address the hows and whys of their conception, elaboration and application, and evaluate their impact, as standard-setting instruments, on the processes of international law operative within UNESCO's fields of competence.

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